We claim:

1. A plastic product covered with a clear coating, the product comprising:

a plastic substrate; and

a clear coating;

wherein the substrate having at least one surface covered by the clear coating through an in-mold-coating method.

2. A plastic product covered with a clear coating, the product comprising:

a plastic substrate;

a pigmented coating; and

a clear coating;

wherein the substrate has at least one surface covered by the pigmented coating through an in-mold-coating process; and wherein the pigmented coating is covered by the clear coating through the in-mold-coating process.

3. A plastic product covered with a clear coating, the product comprising:

a plastic substrate; and

a clear coating;

wherein the substrate has at least one surface covered by the clear coating; wherein the interactions between the at least one surface and the clear coating include covalent bonds; and wherein the clear coating is capable of resisting delamination and/or degradation caused by sunlight, heat, acid rain, and other weather-related factors, and capable of inhibiting fading of the surface of the substrate covered by the clear coating.

4. A plastic product according to claim 3, wherein the substrate comprises aromatic polyurethane.

5. A plastic product according to claim 4, wherein the clear coating comprises aliphatic polyurethane.

6. A plastic product according to claim 3, wherein the clear coating has a thickness of between 0.0001 inches and 0.025 inches.

7. A plastic product according to claim 3, wherein the clear coating has a thickness of between 0.0005 inches and 0.005 inches.

8. A plastic product according to claim 3, wherein the substrate comprises pigments.

9. A plastic product covered with a clear coating, the product comprising:

a plastic substrate;

a pigmented coating; and

a clear coating;

wherein the substrate has at least one surface covered by pigmented coating; wherein the pigmented coating is covered by the clear coating; wherein the interactions between the substrate's surface and the pigmented coating include covalent bonds; wherein the interactions between the pigmented coating and the clear coating include covalent bonds; and wherein the clear coating is capable of resisting delamination and/or degradation caused by sunlight, heat, acid rain, and other weather-related factors, and capable of inhibiting fading of the pigmented coating.

10. A composition for clear coating of in-mold-coating, comprising:

a first unpigmented mixture including a polyol and a first solvent; and

a second mixture including an aliphatic polyisocyanate and a second solvent; and

wherein the first mixture and the second mixture have a volume ratio of between 1.5:1 and 3:1.

11. A composition according to claim 10, wherein the first solvent is selected from the group consisting of ketones, acetates and xylene.

12. A composition according to claim 10, wherein the second solvent is selected from the group of consisting of ketones, acetates and xylene.

13. A composition according to claim 12, wherein the first solvent is same as the second solvent.

14. A kit for in-mold clear coating of a substrate, the kit comprising,

a first unpigmented mixture including a polyol and a first solvent;

a second mixture, including an aliphatic polyisocyanate and a second solvent, for mixing with the first mixture at a volume ratio of between 1.5:1 and 3:1 to form a clear coat;

a third pigmented mixture including a polyol and a third solvent; and

a fourth mixture, including an aliphatic polyisocyanate and a fourth solvent, for mixing with the third mixture at a volume ratio of between 1.5:1 and 3:1 to form a pigmented coat.

15. An in-mold coating method of preparing a plastic part with a clear-coat surface, the method comprising:

providing a mold having a mold surface having a predetermined degree of finish, the degree of finish such that a mating surface of cured polymer-based material fabricated in the mold would exhibit a "Class A" quality;

heating the mold to a temperature between approximately 40 degrees Celsius and approximately 95 degrees Celsius;

providing an unpigmented first-reactant/solvent mixture;

providing an unpigmented second-reactant/solvent mixture;

mixing the unpigmented first-reactant/solvent mixture and the unpigmented second-reactant/solvent mixture to form a clear-coat mixture;

spraying the clear-coat mixture onto the heated mold surface, the clear-coat mixture having an open time on the heated mold surface;

providing a pigmented third-reactant/solvent mixture;

providing a fourth-reactant/solvent mixture;

mixing the pigmented third-reactant/solvent mixture and the fourth-reactant/solvent mixture to form a pigmented mixture;

spraying the pigmented mixture, during the open time of the clear-coat mixture, onto the clear-coat mixture previously sprayed onto the heated mold surface;

applying, over the sprayed pigmented mixture, a substrate-forming material, so as to create an uncured preform; and

allowing the preform to cure so as to form a substrate having a clear-coat surface.

16. The method according to claim 15, wherein the mold may be opened to permit spraying onto the mold surface; wherein the mold is closed after the pigmented mixture is sprayed onto the clear-coat mixture; and wherein the substrate-forming material is injected into the closed mold.

17. The method according to claim 15, wherein a barrier formulation is applied on the sprayed pigmented mixture so as to create an unreinforced barrier layer; wherein

the substrate-forming material includes a polymeric-matrix-forming material and reinforcing components and is applied over the barrier layer; and wherein the preform is cured so as to form a composite with a reinforced substrate and a clear-coat pigmented surface.

18. The method according to claim 17, wherein the reinforcing components include fibers.

19. The method according to claim 15, wherein the unpigmented first-reactant/solvent mixture and the pigmented third-reactant/solvent mixture include polyol as a reactant, and wherein the second-reactant/solvent mixture and the fourth-reactant/solvent mixture include isocyanate as a reactant.

20. The method according to claim 19, wherein the unpigmented first-reactant/solvent mixture and the second-reactant solvent mixture are mixed at a ratio of between 1.5:1 and 3.0:1, and wherein the pigmented third-reactant/solvent mixture and the fourth-reactant solvent mixture are mixed at a ratio of between 1.5:1 and 3.0:1.

21. An in-mold coating method of preparing a plastic part with a clear-coat surface, the method comprising:

providing a mold having a mold surface having a predetermined degree of finish, the degree of finish such that a mating surface of cured polymer-based material fabricated in the mold would exhibit a "Class A" quality;

heating the mold to a temperature between approximately 40 degrees Celsius and approximately 95 degrees Celsius;

providing an unpigmented first-reactant/solvent mixture;

providing an unpigmented second-reactant/solvent mixture;

mixing the unpigmented first-reactant/solvent mixture and the unpigmented second-reactant/solvent mixture to form a clear-coat mixture;

spraying the clear-coat mixture onto the heated mold surface, the clear-coat mixture having an open time on the heated mold surface;

applying, over the sprayed unpigmented mixture, during the open time of the clear-coat mixture, a substrate-forming material, so as to create an uncured preform; and

allowing the preform to cure so as to form a substrate having a clear-coat surface.

22. The method according to claim 21, wherein a barrier formulation is applied on the sprayed clear-coat mixture so as to create an unreinforced barrier layer; wherein the substrate-forming material includes a polymeric-matrix-forming material and reinforcing components and is applied over the barrier layer; and wherein the preform is cured so as to form a composite with a reinforced substrate and a clear-coat surface.

23. The method according to claim 21, wherein the unpigmented first-reactant/solvent mixture includes polyol as a reactant, and wherein the second-reactant/solvent mixture includes isocyanate as a reactant.

24. The method according to claim 23, wherein the unpigmented first-reactant/solvent mixture and the second-reactant solvent mixture are mixed at a ratio of between 1.5:1 and 3.0:1.

25. A plastic product covered with a clear coating, the product being made by a method comprising:

providing a mold having a mold surface having a predetermined degree of finish, the degree of finish such that a mating surface of cured polymer-based material fabricated in the mold would exhibit a "Class A" quality;

heating the mold to a temperature between approximately 40 degrees Celsius and approximately 95 degrees Celsius;

providing an unpigmented first-reactant/solvent mixture;

providing an unpigmented second-reactant/solvent mixture;

mixing the first-reactant/solvent mixture and the second-reactant/solvent mixture to form a clear-coat mixture;

spraying the clear-coat mixture onto the heated mold surface, the clear-coat mixture having an open time on the heated mold surface;

providing a pigmented third-reactant/solvent mixture having at least 40% solids;

providing a fourth-reactant/solvent mixture;

mixing the third-reactant/solvent mixture and the fourth-reactant/solvent mixture to form a pigmented mixture;

spraying the pigmented mixture, during the open time of the clear-coat mixture, onto the clear-coat mixture previously sprayed onto the heated mold surface;

applying, over the sprayed pigmented mixture, a substrate-forming material, so as to create an uncured preform; and

allowing the preform to cure so as to form a substrate having a clear-coat surface.

26. A plastic product covered with a clear coating, the product being made by a method comprising:

providing a mold having a mold surface having a predetermined degree of finish, the degree of finish such that a mating surface of cured polymer-based material fabricated in the mold would exhibit a "Class A" quality;

heating the mold to a temperature between approximately 40 degrees Celsius and approximately 95 degrees Celsius;

providing an unpigmented first-reactant/solvent mixture;

providing an unpigmented second-reactant/solvent mixture;

mixing the unpigmented first-reactant/solvent mixture and the first reactant/solvent mixture to form a clear-coat mixture;

spraying the clear-coat mixture onto the heated mold surface, the clear-coat mixture having an open time on the heated mold surface;

applying, over the sprayed unpigmented mixture, during the open time of the clear-coat mixture, a substrate-forming material, so as to create an uncured preform; and

allowing the preform to cure so as to form a substrate having a clear-coat surface.